GGCACGAGTCGGAGCCGGG

CGGAGGGGAGGGGGGAAAGAGGAGCGCAGGGTGAGAGTGAGCCGCAGGCTTCGGGAGGCGAGGGGGCGGGGGGAGCAGC

M P G E 4
GCCGAGGYCGCCGCCTCCGCCTCCGCCGCCTAGGACTAGGGGGTGGGGGACGGACAAGCCCCG ATG CCG GGG GAG 12

T E E P R P P E Q Q D Q E G G E A A K A 24
ACG GAA GAG CCG AGA CCC CCG GAG CAG CAG GAC CAG GAA GGG GGA GAG GCG GCC AAG GCG 72

A P E E P Q Q R P P E A V A A A P A G T 44
GCT CCG GAG GAG CCC CAA CAA CGG CCC CCT GAG GCG GTC GCG GCG GCG CCT GCA GGG ACC 132

T S S R V L R G G R D R G R A A A A A A 64
ACT AGC AGC CGC GTG CTG AGG GGA GGT CGG GAC CGA GGC CGG GCC GCT GCG GCC GCC GCC 192

A A A V S R R R K A E Y P R R R R S S P 84
GCC GCA GCT GTG TCC CGC CGG AGG AAG GCC GAG TAT CCC CGC CGG CGG AGG AGC AGC CCC 252

S A R P P D V P G Q Q P Q A A K S P S P 104
AGC GCC AGG CCT CCC GAC GTC CCC GGG CAG CAG CCC CAG GCC GCG AAG TCC CCG TCT CCA 312

V Q G K K S P R L L C I E K V T T D K D 124
GTT CAG GGC AAG AAG AGT CCG CGA CTC CTA TGC ATA GAA AAA GTA ACA ACT GAT AAA GAT 372

P K E E K E E E D D S A L P Q E V S I A 144
CCC AAG GAA GAA AAA GAG GAA GAA GAC GAT TCT GCC CTC CCT CAG GAA GTT TCC ATT GCT 432

A S R P S R G W R S S R T S V S R H R D 164
GCA TCT AGA CCT AGC CGG GGC TGG CGT AGT AGT AGG ACA TCT GTT TCT CGC CAT CGT GAT 492

T E N T R S S R S K T G S L Q L I C K S 184
ACA GAG AAC ACC CGA AGC TCT CGG TCC AAG ACC GGT TCA TTG CAG CTC ATT TGC AAG TCA 552

E P N T D Q L D Y D V G E E H Q S P G G 204
GAA CCA AAT ACA GAC CAA CTT GAT TAT GAT GTT GGA GAA GAG CAT CAG TCT CCA GGT GGC 612

I S G E E E E E E E E E M L I S E E E I 224
ATT AGT GGT GAA GAG GAA GAG GAG GAG GAA GAA GAG ATG TTA ATC AGT GAA GAG GAG ATA 672

P F K D D P R D E T Y K P H L E R E T P 244
CCA TTC AAA GAT GAT CCA AGA GAT GAG ACC TAC AAA CCC CAC TTA GAA AGG GAA ACC CCA 732

K P R R K S G K V K E E K E K K E I K V 264
AAG CCA CGG AGA AAA TCA GGG AAG GTA AAA GAA GAG AAG GAG AAG AAG GAA ATT AAA GTG 792

E V E V E V K E E E N E I R E D E E P P 284
GAA GTA GAG GTG GAG GTG AAA GAA GAG GAG AAT GAA ATT AGA GAG GAT GAG GAA CCT CCA 852

R K R G R R R K D D K S P R L P K R R K 304
AGG AAG AGA GGA AGA AGA CGA AAA GAT GAC AAA AGT CCA CGT TTA CCC AAA AGG AGA AAA 912

K P P I Q Y V R C E M E G C G T V L A H 324
AAG CCT CCA ATC CAG TAT GTC CGT TGT GAG ATG GAA GGA TGT GGA ACT GTC CTT GCC CAT 972

P R Y L Q H H I K Y Q H L L K K K Y V C 344
CCT CGC TAT TTG CAG CAC CAC ATT AAA TAC CAG CAT TTG CTG AAG AAG AAA TAT GTA TGT 1032

P H P S C G R L F R L Q K Q L L R H A K 364
CCC CAT CCC TCC TGT GGA CGA CTC TTC AGG CTT CAG AAG CAA CTT CTG CGA CAT GCC AAA 1092

H H T D Q R D Y I C E Y C A R A F K S S 384
CAT CAT ACA GAT CAA AGG GAT TAT ATC TGT GAA TAT TGT GCT CGG GCC TTC AAG AGT TCC 1152

FIG. 1A

```
H   N   L   A   V   H   R   M   I   H   T   G   E   K   P   L   Q   C   E   I     404
CAC AAT CTG GCA GTG CAC CGG ATG ATT CAC ACT GGC GAG AAG CCA TTA CAA TGT GAG ATC  1212

C   G   F   T   C   R   Q   K   A   S   L   N   W   H   M   K   K   H   D   A     424
TGT GGA TTT ACT TGT CGA CAA AAG GCA TCT CTT AAT TGG CAC ATG AAG AAA CAT GAT GCA  1272

D   S   F   Y   Q   F   S   C   N   I   C   G   K   K   F   E   K   K   D   S     444
GAC TCC TTC TAC CAG TTT TCT TGC AAT ATC TGT GGC AAA AAA TTT GAG AAG AAG GAC AGC  1332

V   V   A   H   K   A   K   S   H   P   E   V   L   I   A   E   A   L   A   A     464
GTA GTG GCA CAC AAG GCA AAA AGC CAC CCT GAG GTG CTG ATT GCA GAA GCT CTG GCT GCC  1392

N   A   G   A   L   I   T   S   T   D   I   L   G   T   N   P   E   S   L   T     484
AAT GCA GGC GCC CTC ATC ACC AGC ACA GAT ATC TTG GGC ACT AAC CCA GAG TCC CTG ACG  1452

Q   P   S   D   G   Q   G   L   P   L   L   P   E   P   L   G   N   S   T   S     504
CAG CCT TCA GAT GGT CAG GGT CTT CCT CTT CTT CCT GAG CCC TTG GGA AAC TCA ACC TCT  1512

G   E   C   L   L   L   E   A   E   G   M   S   K   S   Y   C   S   G   T   E     524
GGA GAG TGC CTA CTG TTA GAA GCT GAA GGG ATG TCA AAG TCA TAC TGC AGT GGG ACG GAA  1572

R   V   S   L   M   A   D   G   K   I   F   V   G   S   G   S   S   G   G   T     544
CGG GTG AGC CTG ATG GCT GAT GGG AAG ATC TTT GTG GGA AGC GGC AGC AGT GGA GGC ACT  1632

E   G   L   V   M   N   S   D   I   L   G   A   T   T   E   V   L   I   E   D     564
GAA GGG CTG GTT ATG AAC TCA GAT ATA CTC GGT GCT ACC ACA GAG GTT CTG ATT GAA GAT  1692

S   D   S   A   G   P   *                                                         570
TCA GAC TCT GCC GGA CCT TAG TGGACAGGAAGACTTGGGGCATGGGACAGCTCAGACTTTGTATTTAAAAGT  1761

TAAAAAGGACAAAAAAAAAAAAAAAAAA                                                     1791
```

FIG. 1B

GCACGAGCGGAGAGCCGCGCAGGGCGCGGGCCGCGCGGGGTGGGGCAGCCGGAGCGCA

GGCCCCCGATCCCCGGCGGGCGCCCCCGGGCCCCCGCGCGCGCCCCGGCCTCCGGGAGACTGGCGCATGCCACGGAGCG

CCCCTCGGGCCGCCGCCGCTCCTGCCCGGGCCCCTGCTGCTGCTGCTGTCGCCTGCGCCTGCTGCCCCAACTCGGCGCC

M F 2

CGACTCACAAAGAAACATCATGTTCGCTCCTTAGCAGGCAAACGACTTTTCTCCTCGCCTCCTCGCCCCGC ATG TTC 6

R T K R S A L V R R L W R S R A P G G E 22

AGG ACC AAA CGA TCT GCG CTC GTC CGG CGT CTC TGG AGG AGC CGT GCG CCC GGC GGC GAG 66

D E E E G A G G G G G G G E L R G E G A 42

GAC GAG GAG GAG GGC GCA GGG GGA GGT GGA GGA GGA GGC GAG CTG CGG GGA GAA GGG GCG 126

T D S R A H G A G G G G P G R A G C C L 62

ACG GAC AGC CGA GCG CAT GGG GCC GGT GGC GGC GGC CCG GGC AGG GCT GGA TGC TGC CTG 186

G K A V R G A K G H H H P H P P A A G A 82

GGC AAG GCG GTG CGA GGT GCC AAA GGT CAC CAC CAT CCC CAC CCG CCA GCC GCG GGC GCC 246

G A A G G A E A D L K A L T H S V L K K 102

GGC GCG GCC GGG GGC GCC GAG GCG GAT CTG AAG GCG CTC ACG CAC TCG GTG CTC AAG AAA 306

L K E R Q L E L L L Q A V E S R G G T R 122

CTG AAG GAG CGG CAG CTG GAG CTG CTG CTC CAG GCC GTG GAG TCC CGC GGC GGG ACG CGC 366

T A C L L L P G R L D C R L G P G A P A 142

ACC GCG TGC CTC CTG CTG CCC GGC CGC CTG GAC TGC AGG CTG GGC CCG GGG GCG CCC GCC 426

G A Q P A Q P P S S Y S L P L L L C K V 162

GGC GCG CAG CCT GCG CAG CCG CCC TCG TCC TAC TCG CTC CCC CTC CTG CTG TGC AAA GTG 486

F R W P D L R H S S E V K R L C C C E S 182

TTC AGG TGG CCG GAT CTC AGG CAT TCC TCG GAA GTC AAG AGG CTG TGT TGC TGT GAA TCT 546

Y G K I N P E L V C C N P H H L S R L C 202

TAC GGG AAG ATC AAC CCC GAG CTG GTG TGC TGC AAC CCC CAT CAC CTT AGC CGA CTC TGC 606

E L E S P P P P Y S R Y P M D F L K P T 222

GAA CTA GAG TCT CCC CCC CCT CCT TAC TCC AGA TAC CCG ATG GAT TTT CTC AAA CCA ACT 666

A D C P D A V P S S A E T G G T N Y L A 242

GCA GAC TGT CCA GAT GCT GTG CCT TCC TCC GCT GAA ACA GGG GGA ACG AAT TAT CTG GCC 726

P G G L S D S Q L L L E P G D R S H W C 262

CCT GGG GGG CTT TCA GAT TCC CAA CTT CTT CTG GAG CCT GGG GAT CGG TCA CAC TGG TGC 786

V V A Y W E E K T R V G R L Y C V Q E P 282

GTG GTG GCA TAC TGG GAG GAG AAG ACG AGA GTG GGG AGG CTC TAC TGT GTC CAG GAG CCC 846

S L D I F Y D L P Q G N G F C L G Q L N 302

TCT CTG GAT ATC TTC TAT GAT CTA CCT CAG GGG AAT GGC TTT TGC CTC GGA CAG CTC AAT 906

S D N K S Q L V Q K V R S K I G C G I Q 322

TCG GAC AAC AAG AGT CAG CTG GTG CAG AAG GTG CGG AGC AAA ATC GGC TGC GGC ATC CAG 966

L T R E V D G V W V Y N R S S Y P I F I 342

CTG ACG CGG GAG GTG GAT GGT GTG TGG GTG TAC AAC CGC AGC AGT TAC CCC ATC TTC ATC 1026

K S A T L D N P D S R T L L V H K V F P 362

AAG TCC GCC ACA CTG GAC AAC CCG GAC TCC AGG ACG CTG TTG GTA CAC AAG GTG TTC CCC 1086

FIG. 2A

```
 G   F   S   I   K   A   F   D   Y   E   K   A   Y   S   L   Q   R   P   N   D      382
GGT TTC TCC ATC AAG GCT TTC GAC TAC GAG AAG GCG TAC AGC CTG CAG CGG CCC AAT GAC    1146

 H   E   F   M   Q   Q   P   W   T   G   F   T   V   Q   I   S   F   V   K   G      402
CAC GAG TTT ATG CAG CAG CCG TGG ACG GGC TTT ACC GTG CAG ATC AGC TTT GTG AAG GGC    1206

 W   G   Q   C   Y   T   R   Q   F   I   S   S   C   P   C   W   L   E   V   I      422
TGG GGT CAG TGC TAC ACC CGC CAG TTC ATC AGC AGC TGC CCG TGC TGG CTA GAG GTC ATC    1266

 F   N   S   R   *                                                                  426
TTC AAC AGC CGG TAG  CCGCGTGCGGAGGGGACAGAGCGTGAGCTGAGCAGGCCACACTTCAAACTACTTTGCT    1278

GCTAATATTTTCCTCCTGAGTGCTTGCTTTTCATGCAAACTCTTTGGTCGTTTTTTTTTGTTTGTTGGTTGGTTTTCT

TCTTCTCGTCCTCGTTTGTGTTCTGTTTTGTTTCGCTCTTTGAGAAATAGCTTATGAAAAGAATTGTTGGGGGTTTTTT

TGGAAGAAGGGGCAGGTATGATCGGCAGGACACCCTGATAGGAAGAGGGGAAGCAGAAATCCAAGCACCACCAAACACA

GTGTATGAAGGGGGGCGGTCATCATTTCACTTGTCAGGAGTGTGTGTGAGTGTGAGTGTGCGGCTGTGTGTGCACGCGT

GTGCAGGAGCGGCAGATGGGGAGACAACGTGCTCTTTGTTTTGTGTCTCTTATGGATGTCCCCAGCAGAGAGGTTTGCA

GTCCCAAGCGGTGTCTCTCCTGCCCCTTGGACACGCTCAGTGGGGCAGAGGCAGTACCTGGGCAAGCTGGCGGCTGGGG

TCCCAGCAGCTGCCAGGAGCACGGCTCTGTCCCCAGCCTGGGAAAGCCCCTGCCCCTCCTCTCCCTCATCAAGGACACG

GGCCTGTCCACAGGCTTCTGAGCAGCGAGCCTGCTAGTGGCCGAACCAGAACCAATTATTTTCATCCTTGTCTTATTCC

CTTCCTGCCAGCCCCTGCCATTGTAGCGTCTTTCTTTTTTGGCCATCTGCTCCTGGATCTCCCTGAGATGGGCTTCCCA

AGGGCTGCCGGGGCAGCCCCCTCACAGTATTGCTCACCCAGTGCCCTCTCCCCTCAGCCTCTCCCCTGCCTGCCCTGGT

GACATCAGGTTTTTCCCGGACTTAGAAAACCAGCTCAGCACTGCCTGCTCCCATCCTGTGTGTTAAGCTCTGCTATTAG

GCCAGCAAGCGGGGATGTCCCTGGGAGGGACATGCTTAGCAGTCCCCTTCCCTCCAAGAAGGATTTGGTCCGTCATAAC

CCAAGGTACCATCCTAGGCTGACACCTAACTCTTCTTTCATTTCTTCTACAACTCATACACTCGTATGATACTTCGACA

CTGTTCTTAGCTCAATGAGCATGTTTAGACTTTAACATAAGCTATTTTTCTAACTACAAAGGTTTAAATGAACAAGAGA

AGCATTCTCATTGGAAATTTAGCATTGTAGTGCTTTGAGAGAGAAAGGACTCCTGAAAAAAAAACCTGAGATTTATTAAA

GAAAAAAATGTATTTTATGTTATATATAAATATATTATTACTTGTAAATATAAAGACGTTTTATAAGCATCATTATTTA

TGTATTGTGCAATGTGTATAAACAAGAAAAATAAAGAAAAGATGCACTTTGCTTTAATATAAATGCAAATAACAAATGC

CAAATTAAAAAAAGATAAACACAAGATTGGTGTTTTTTCCTATGGGTGTTATCACCTAGCTGAATGTTTTTCTAAAGGAG

TTTATGTTCCATTAAACGATTTTTAAAATGTACACTTGAAAAAAAAAAAAAAAAA
```

FIG. 2B

```
                                                                GGCACGAGGTTGCCCTGGCGGAGCAGAGACAGGCCCTCGGGGTGGAGGTC

                                                          M  C  N  T  P  T  Y  C  D  L      10
TTTGGTTTCATAAGAGCCTGAGAGAGATTTTTCTAAGAT ATG TGT AAC ACA CCA ACG TAC TGT GAC CTA      30

 G  K  A  A  K  D  V  F  N  K  G  Y  G  F  G  M  V  K  I  D      30
GGA AAG GCT GCT AAG GAT GTC TTC AAC AAA GGA TAT GGC TTT GGC ATG GTC AAG ATA GAC      90

 L  K  T  K  S  C  S  G  V  E  F  S  T  S  G  H  A  Y  T  D      50
CTG AAA ACC AAG TCT TGT AGT GGA GTG GAA TTT TCT ACT TCT GGT CAT GCT TAC ACT GAT     150

 T  G  K  A  S  G  N  L  E  T  K  Y  K  V  C  N  Y  G  L  T      70
ACA GGG AAA GCA TCA GGC AAC CTA GAA ACC AAA TAT AAG GTC TGT AAC TAT GGA CTT ACC     210

 F  T  Q  K  W  N  T  D  N  T  L  G  T  E  I  S  W  E  N  K      90
TTC ACC CAG AAA TGG AAC ACA GAC AAT ACT CTA GGG ACA GAA ATC TCT TGG GAG AAT AAG     270

 L  A  E  G  L  K  L  T  L  D  T  I  F  V  P  N  T  G  K  K     110
TTG GCT GAA GGG TTG AAA CTG ACT CTT GAT ACC ATA TTT GTA CCG AAC ACA GGA AAG AAG     330

 S  G  K  L  K  A  S  Y  K  R  D  C  F  S  V  G  S  N  V  D     130
AGT GGG AAA TTG AAG GCC TCC TAT AAA CGG GAT TGT TTT AGT GTT GGC AGT AAT GTT GAT     390

 I  D  F  S  G  P  T  I  Y  G  W  A  V  L  A  F  E  G  W  L     150
ATA GAT TTT TCT GGA CCA ACC ATC TAT GGC TGG GCT GTG TTG GCC TTC GAA GGG TGG CTT     450

 A  G  Y  Q  M  S  F  D  T  A  K  S  K  L  S  Q  N  N  F  A     170
GCT GGC TAT CAG ATG AGT TTT GAC ACA GCC AAA TCC AAA CTG TCA CAG AAT AAT TTC GCC     510

 L  G  Y  K  A  A  D  F  Q  L  H  T  H  V  N  D  G  T  E  F     190
CTG GGT TAC AAG GCT GCG GAC TTC CAG CTG CAC ACA CAT GTG AAC GAT GGC ACT GAA TTT     570

 G  G  S  I  Y  Q  K  V  N  E  K  I  E  T  S  I  N  L  A  W     210
GGA GGT TCT ATC TAC CAG AAG GTG AAT GAG AAG ATT GAA ACA TCC ATA AAC CTT GCT TGG     630

 T  A  G  S  N  N  T  R  F  G  I  A  A  K  Y  M  L  D  C  R     230
ACA GCT GGG AGT AAC AAC ACC CGT TTT GGC ATT GCT GCT AAG TAC ATG CTG GAT TGT AGA     690

 T  S  L  S  A  K  V  N  N  A  S  L  I  G  L  G  Y  T  Q  T     250
ACT TCT CTC TCT GCT AAA GTA AAT AAT GCC AGC CTG ATT GGA CTG GGT TAT ACT CAG ACC     750

 L  R  P  G  V  K  L  T  L  S  A  L  I  D  G  K  N  F  S  A     270
CTT CGA CCA GGA GTC AAA TTG ACT TTA TCA GCT TTA ATC GAT GGG AAG AAC TTC AGT GCA     810

 G  G  H  K  V  G  L  G  F  E  L  E  A  *                    283
GGA GGT CAC AAG GTT GGC TTG GGA TTT GAA CTG GAA GCT TAA TGTGGTTTGAGGAAAGCATCAGA     849

TTTGTCCCTGGAAGTGAAGAGAAATGAACCCACTATGTTTTGGCCTTAAAATTCTTCTGTGAAATTTCAAAAGTGTGAA

CTTTTTATTCTTCCAAAGAATTGTAATCCTCCCCACACTGAAGTCTAGGGGTTGCGAATCCCTCCTGAGGGAGACGCTT

GAAGGCATGCCTGGAAGTTGTCATGTTTGTGCCACGTTTCAGTTCAGTTCTGAAGTGTTATTAAATGTGTTCCTCAGCG

ACAGTGTAGCGTCATGTTAGAGGAGACGATCTGACCCACCAGTTTGTACATCACGTCCTGCATGTCCCACACCATTTTT

TCATGACCTTGTAATATACTGGTCTCTGTGCTATAGTGGAATCTTTGGTTTTGCATCATAGTAAAATAAAATAAACCCA

TCACATTTGGAACATAAAAAAAAAAAAAAAAAA
```

FIG. 3

```
 T   S   L   A   L   V   L   N   L   L   Q   I   Q   R   N   V   T   L   F   P          20
ACG AGC CTA GCC CTG GTG CTC AAC CTG CTG CAG ATC CAG AGG AAT GTC ACT CTC TTC CCC          60

 E   E   V   I   A   T   I   F   S   S   A   W   W   V   P   P   C   C   G   T          40
GAG GAG GTG ATC GCC ACC ATC TTT TCC TCC GCC TGG TGG GTC CCT CCC TGC TGC GGG ACA         120

 A   A   A   V   V   G   L   L   Y   P   C   I   D   S   H   L   G   E   P   H          60
GCA GCT GCT GTT GTT GGC CTA CTG TAC CCC TGT ATC GAC AGT CAC CTC GGA GAA CCC CAC         180

 K   F   K   R   E   W   A   S   V   M   R   C   I   A   V   F   V   G   I   N          80
AAA TTT AAG AGA GAA TGG GCC AGT GTC ATG CGC TGC ATA GCA GTT TTT GTT GGC ATT AAC         240

 H   A   S   A   K   L   D   F   A   N   N   V   Q   L   S   L   T   L   A   A         100
CAC GCC AGT GCT AAA TTG GAT TTT GCC AAT AAT GTC CAG CTG TCC TTG ACT TTA GCA GCC         300

 L   S   L   G   L   W   W   T   F   D   R   S   R   S   G   L   G   L   G   I         120
CTA TCT TTG GGC CTT TGG TGG ACA TTT GAT CGT TCC AGA AGT GGC CTT GGG CTG GGG ATC         360

 T   I   A   F   L   A   T   L   I   T   Q   F   L   V   Y   N   G   V   Y   Q         140
ACC ATA GCT TTT CTA GCT ACG CTG ATC ACG CAG TTT CTC GTG TAT AAT GGT GTC TAT CAG         420

 Y   T   S   P   D   F   L   Y   I   R   S   W   L   P   C   I   F   F   S   G         160
TAT ACA TCC CCA GAT TTC CTC TAT ATT CGT TCT TGG CTC CCT TGT ATA TTT TTC TCA GGA         480

 G   V   T   V   G   N   I   G   R   Q   L   A   M   G   V   P   E   K   P   H         180
GGC GTC ACG GTG GGG AAC ATA GGA CGA CAG TTA GCT ATG GGT GTT CCT GAA AAG CCC CAT         540

 S   D   *                                                                           182
AGT GAT TGA GTCTTCAAAACCACCGATTCTGAGAGCAAGGAAGATTTTGGAAGAAAATCTGACTGTGGATTATGAC         546

AAAGATTATCTTTTTTCTTAAGTAATCTATTTAGATCGGGCTGACTGTACAAATGACTCCTGGAAAAAACTCTTCACCT

AGTCTAGAATAGGGAGGTGGAGAATGATGACTTACCCTGAAGTCTTCCCTTGACTGCCCGCACTGGCGCCTGTCTGTGC

CCTGGAGCATTCTGCCCAGGCTACGTGGGTTCAGGCAGGTGGCAGCTTCCCAAGTATTCGATTTCATTCATGTGATTAA

AACAAGTTGCCATATTTCAAAAAAAAAAAAAAAAAAMCTCGAGACCAACCCGCAGTTTTGTGTCAGTGCCCAAAGGAGGT

AGGTTGATGGTGCTTAACAAACATGAAGTATGGTGTAATAGGAATAATATTTATCCNAAAGATTTTTAAAAATAGGGCT

GTGTTTAAAAAAAAAAAAAAAAAAA
```

FIG. 4

M C H S R S C H P T M T I L Q A P T P A 20
ATG TGT CAC TCT CGC AGC TGC CAC CCG ACC ATG ACC ATC CTG CAG GCC CCG ACC CCG GCC 60

P S T I P G P R R G S G P E I F T F D P 40
CCC TCC ACC ATC CCG GGA CCC CGG CGG GGC TCC GGT CCT GAG ATC TTC ACC TTC GAC CCT 120

L P E P A A A P A G R P S A S R G H R K 60
CTC CCG GAG CCC GCA GCG GCC CCT GCC GGG CGC CCC AGC GCC TCT CGC GGG CAC CGA AAG 180

R S R R V L Y P R V V R R Q L P V E E P 80
CGC AGC CGC AGG GTT CTC TAC CCT CGA GTG GTC CGG CGC CAG CTG CCA GTC GAG GAA CCG 240

N P A K R L L F L L L T I V F C Q I L M 100
AAC CCA GCC AAA AGG CTT CTC TTT CTG CTG CTC ACC ATC GTC TTC TGC CAG ATC CTG ATG 300

A E E G V P A P L P P E D A P N A A S L 120
GCT GAA GAG GGT GTG CCG GCG CCC CTG CCT CCA GAG GAC GCC CCT AAC GCC GCA TCC CTG 360

A P T P V S P V L E P F N L T S E P S D 140
GCG CCC ACC CCT GTG TCC CCC GTC CTC GAG CCC TTT AAT CTG ACT TCG GAG CCC TCG GAC 420

Y A L D L S T F L Q Q H P A A F * 157
TAC GCT CTG GAC CTC AGC ACT TTC CTC CAG CAA CAC CCG GCC GCC TTC TAA 471

CTGTGACTCCCCGCACTCCCCAAAAAGAATCCGAAAAACCACAAAGAAACACCAGGCGTACCTGGTGCGCGAGAGCGTA 550

TCCCCAACTGGGACTTCCGAGGCAACTTGAACTCAGAACACTACAGCGGAGACGCCACCCGGTGCTTGAGGCGGGACCG 629

AGGCGCACAGAGACCGAGGCGCATAGAGACCGAGGCACAGCCCAGCTGGGGCTAGGCCCGGTGGAAGGAGAGCGTCGT 708

TAATTTATTTCTTATTGCTCCTAATTAATATTTATATGTATTTATGTACGTCCTCCTAGGTGATGGAGATGTGTACGTA 787

ATATTTATTTTAACTTATGCAAGGGTGTGAGATGTTCCCTCTGCTGTAAATGCAGGTCTCTTGGTATTTATTGAGCTTT 866

GTGGGACTGGTGGAAGCAGGACACCTGGAACTGCGGCAAAGTAGGAGAAGAAATGGGGAGGACTCGGGTGGGGGAGGAC 945

GTCCCGGCTGGGATGAAGTCTGGTGGTGGGTCGTAAGTTTAGGAGGTGACTGCATCCTCCAGCATCTCAACTCCGTCTG 1024

TCTACTGTGTGAGACTTCGGCGGACCATTAGGAATGAGATCCGTGAGATCCTTCCATCTTCTTGAAGTCGCCTTTAGGG 1103

TGGCTGCGAGGTAGAGGGTTGGGGGTTGGTGGGCTGTCACGGAGCGACTGTCGAGATCGCCTAGTATGTTCTGTGAACA 1182

CAAATAAAATTGATTTACTGTCAAAAAAAAAAAAAAAAAACTCGAG 1228

FIG. 5

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          GAATTCGGCACGAGGMCAGGAGCTCCTTTWCTGCGTCTCCCATCATGGGCTTAGGGTTGAGTCTTCA   68
GGTTCTGGGGGCAGGAAGGACGGGCACTCAGGAGCCCCCCTCCCCATCCACAGCCCCTCTTTGGGAGGGGGGAAACTTG  147
GCAACCCGGGAGGCATGTGGATCTTTTCCTAAGCAAGATGCTGAGCTGGAAAGATGGGGTGTAAGGTAATGTCCCAAA  226
CTGAAACTTTGCCAGGCACTGGGAGAGGCTGTGAACTCTTTTCTGGCTTTAGAATTTAGGTCTAGATCCCAAAAGGCTA-  305
AGTACCCCCTGGGGGCTAACCAGAGGCATGCCTGGGCTGAGCTGAACCTTCTGGTGCACTGGCCCCTGGCTGACTGCTC  384
TTCTGCAGGAAGTTGGAGGAGATTCCTGAAGTTGATTCCTCAGGCTGGATGTCCAAGGGGGTTGGAGTTTCTGATGTCT  463
TTCTGTCTCCCTCTCTTTTCTTTCTCTCCCTACCAGGTCCACTTCTTTCAGAGGGGCCTGCGGTGCTCTAAAAGTTCTC  542
CTGTTAAAGTTTAGAGCAAATTGGTTATTATTTTAAAATCAATAAAACTTTTAAAAGTACTAAGACAACTTCTAAGAGG  621
GGAGTGGACAGAGGGCCTGGTGGCAGCTCACAGTTTCTTTTCTGACCTTTGGTCTCACCCACCAAGTGTCCCACCTGAG  700
TGCCCACCTTGCCCACCTGAGGTAATGCCCTGGGGCTCCACCAGTCCAGATCCACAGGGCGCAGCCATGTGGGAGTGGC  779
GGCTGATTGTTACCCAGTAGTGTTGATAGCACATTATTCATAACAGCCAAAGAGAGGAAGCAACCCAAATGTCCATTAG  858
CTGATAAATGGATAAATGAAATATGGTACGTCCGAAGAATGGAATATCATTCACCCATGAAAAAGAACGAAGTCCAGCA  937
CCAAAACGTGCTACAACATGGATGAACTTCGATGACTTTGTGCCACATGAAAGAAGAAGCCAGCCACAAAAGGCCATAT 1016

                  M   S   R   M   G   K   P   I   E   T   Q   K   S   P   P   P    16
ATTGTATGAAATGAA ATG TCC AGA ATG GGC AAA CCC ATA GAG ACA CAA AAA TCT CCG CCA CCT  1079

 P   Y   S   R   L   S   P   R   D   E   Y   K   P   L   D   L   S   D   S   T    36
CCC TAC TCT CGG CTG TCT CCT CGC GAC GAG TAC AAG CCA CTG GAT CTG TCC GAT TCC ACA  1139

 L   S   Y   T   E   T   E   A   T   N   S   L   I   T   A   P   G   E   F   S    56
TTG TCT TAC ACT GAA ACG GAG GCT ACC AAC TCC CTC ATC ACT GCT CCG GGT GAA TTC TCA  1199

 D   A   S   M   S   P   D   A   T   K   P   S   H   W   C   S   V   A   Y   W    76
GAC GCC AGC ATG TCT CCG GAC GCC ACC AAG CCG AGC CAC TGG TGC AGC GTG GCG TAC TGG  1259

 E   H   R   T   R   V   G   R   L   Y   A   V   Y   D   Q   A   V   S   I   F    96
GAG CAC CGG ACG CGC GTG GGC CGC CTC TAT GCG GTG TAC GAC CAG GCC GTC AGC ATC TTC  1319

 Y   D   L   P   Q   G   S   G   F   C   L   G   Q   L   N   L   E   Q   R   S   116
TAC GAC CTA CCT CAG GGC AGC GGC TTC TGC CTG GGC CAG CTC AAC CTG GAG CAG CGC AGC  1379

 E   S   V   R   R   T   R   S   K   I   G   F   G   I   L   L   S   K   E   P   136
GAG TCG GTG CGG CGA ACG CGC AGC AAG ATC GGC TTC GGC ATC CTG CTC AGC AAG GAG CCC  1439

 D   G   V   W   A   Y   N   R   G   E   H   P   I   F   V   N   S   P   T   L   156
GAC GGC GTG TGG GCC TAC AAC CGC GGC GAG CAC CCC ATC TTC GTC AAC TCC CCG ACG CTG  1499

 D   A   P   G   G   R   A   L   V   V   R   K   V   P   P   G   Y   S   I   K   176
GAC GCG CCC GGC GGC CGC GCC CTG GTC GTG CGC AAG GTG CCC CCC GGC TAC TCC ATC AAG  1559

 V   F   D   F   E   R   S   G   L   Q   H   A   P   E   P   D   A   A   D   G   196
GTG TTC GAC TTC GAG CGC TCG GGC CTG CAG CAC GCG CCC GAG CCC GAC GCC GCC GAC GGC  1619

 P   Y   D   P   N   S   V   R   I   S   F   A   K   G   W   G   P   C   Y   S   216
CCC TAC GAC CCC AAC AGC GTC CGC ATC AGC TTC GCC AAG GGC TGG GGG CCC TGC TAC TCC  1679

 R   Q   F   I   T   S   C   P   C   W   L   E   I   L   L   N   K   P   R   •   235
CGG CAG TTC ATC ACC TCC TGC CCC TGC TGG CTG GAG ATC CTC CTC AAC AAC CCC AGA TAG  1739
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FIG. 6A

TGGCGGCCCCGGCGGGAGGGGCGGGTGGGAGGCCGCGGCCACCGCCACCTGCCGGCCTCGAGAGGGGCCGATGCCCAGA 1818

GACACAGCCCCCACGGACAAAACCCCCCAGATATCATCTACCTAGATTTAATATAAAGTTTTATATATTATATGGAAAT 1897

ATATATTATACTTGTAATTATGGAGTCATTTTTACAATGTAATTATTTATGTATGGTGCAATGTGTGTATATGGACAAA 1976

ACAAGAAAGACGCACTTTGGCTTATAATTCTTTCAATACAGATATATTTTCTTTCTCTTCCTCCTTCCTCTTCCTTACT 2055

TTTTATATATATATATAAAGAAAATGATACAGCAGAGCTAGGTGGAAAAGCCTGGGTTTGGTGTATGGTTTTTGAGATA 2134

TTAATGCCCAGACAAAAAGCTAATACCAGTCACTCGATAATAAAGTATTCGCATTATAGTTTTTTTTAAACTGTCTTCT 2213

TTTTACAAAGAGGGGCAGGTAGGGCTTCAGCGGATTTCTGACCCATCATGTACCTTGAAACTTGACCTCAGTTTTCAAG 2292

TTTTACTTTTATTGGATAAAGACAGAACAAATTGAAAAGGGAGGAAAGTCACATTTACTCTTAAGTAAACCAGAGAAAG 2371

TTCTGTTGTTCCTTCCTGCCCATGGCTATGGGGTGTCCAGTGGATAGGGATGGCGGTGGGGAAAAGGAGAATACACTGG 2450

CCATTTATCCTGGACAAGCTCTTCCAGTCTGATGGAGGAGGTTCATGCCCTAGCCTAGAAAGGCCCAGGTCCATGACCC 2529

CCATCTTTGAGTTATGAGCAAGCTAAAAGAAGACACTATTTCTCACCATTTTGTGGAAATGGCCTGGGGAACAAAGACT 2608

GAAATGGGCCTTGAGCCCACCTGCTACCTTGCAGAGAACCATCTCGAGCCCCGTAGATCTTTTTAGGACCTCCACAGGC 2687

TATTTCCCACCCCCCAGCCAAAAATAGCTCAGAATCTGCCCATCCAGGGCTGTATTAATGATTTATGTAAAGGCAGATG 2766

GTTTATTTCTACTTTGTAAAAGGGAAAAGTTGAGGTTCTGGAAGGATAAATGATTTGCTCATGAGACAAAATCAAGGTT 2845

AGAAGTTACATGGAATTGTAGGACCAGAGCCATATCATTAGATCAGCTTTCTGAAGAATATTCTCHAAAAAAGAAAGTC 2924

TCCTTGGCCAGATAACTAAGAGGAATGTTTCATTGTATATCTTTTTTCTTGGAGATTTATATTAACATATTAAGTGCTC 3003

TGAGAAGTCCTGTGTATTATCTCTTGCTGCATAATAAATTATCCCCAAACTTAAAAAAAAAAAAAAAAAAAAAACTCGA 3082

G 3083

FIG. 6B